

IN THE CLAIMS:

Please cancel Claims 3, 15, 22, 34, 41, 53, 60 and 72 without prejudice or disclaimer of subject matter and please amend the claims as shown below. The claims, as pending in the subject application, read as follows:

1. (Currently Amended) An information processing apparatus for dividing a print job to make a plurality of printers execute a print process, comprising:

spooling means for spooling device-independent-format data converted from data provided by an application; data in specific file formats in accordance with a combination of a plurality of printers for outputting the divided print jobs; and

assignment means for generating from the device-independent-format data spooled by said spooling means, a plurality of pieces of divided print data for distribution printing, the divided print data being formed in a device-independent format;

output means for outputting the plurality of pieces of divided print data generated by said assignment means to respective corresponding printer drivers; and

output control means for outputting a plurality of pieces of print data, generated in a device-dependent format from the respective ones of the plurality of pieces of divided print data output by said output means, to the respective ones of the plurality of printers, generating divided print data from the data spooled by said spooling means, and outputting the divided print data to the printers in order to print the divided print jobs at the printers

wherein said assignment means is able to assign the plurality of pieces of divided print data in the device-independent format to the printer drivers that generate different types of print data.

2. (Original) An information processing apparatus according to claim 1, further comprising registering means for registering a plurality of output destination printers.

3. (Canceled)

4. (Currently Amended) An information processing apparatus according to claim 1, further comprising judging means for judging a combination of the plurality of printers and judging whether device-dependent data or device-independent data is spooled.

5. (Original) An information processing apparatus according to claim 4, wherein said judging means judges whether all of the plurality of printers are printers using a printer language capable of dividing the print job in a page unit.

6. (Original) An information processing apparatus according to claim 4, wherein said judging means judges whether all of the plurality of printers are printers of a same type.

7. (Original) An information processing apparatus according to claim 4, wherein said judging means judges whether all of the plurality of printers have a same printer driver.

8. (Currently Amended) An information processing apparatus according to claim 4, wherein the device-dependent data is RAW data and device-independent data is EMF data.

9. (Original) An information processing apparatus according to claim 1, further comprising:

judging means for judging whether a page number of a page to be printed can be designated in the print job to be output from each printer; and

transfer control means for copying the print job as many as the number of printers for outputting the divided print jobs, adding a page number of a page to be printed to each of the copied print jobs, and transferring the copied print jobs to the printers, if said judging means judges that the page number can be designated, and if said judging means judges that the page number cannot be designated, dividing the print jobs for each page to be printed at the printers for distributed printing and transferring the divided print jobs to the printers.

10. (Original) An information processing apparatus according to claim 9, wherein said judging means judges from page designation print performance information of each printer whether the page number of a page to be printed can be designated in the print job to be output from each printer.

11. (Currently Amended) An information processing apparatus according to claim 2, further comprising:

re-arranging means for re-arranging a combination of a plurality of printers for outputting the divided print job[[s]], among the plurality of printers registered by said registering means, if a printer for outputting the divided print job cannot execute a print process; and

report forming means for forming a distributed printing result report in accordance with a distributed printing result obtained by the printers re-arranged by said re-arranging means,

wherein after the distributed printing by the rearranged printers, the distributed printing result report formed by said report forming means is output to one of the re-arranged printers.

12. (Original) An information processing apparatus according to claim 2, further comprising distributed data generating means for dividing the print job and making a printer driver corresponding to each printer generate print data to print the print data at the printers registered by said registering means, wherein said distributed data generating means controls each printer driver to generate the print data added with an offline command.

13. (Original) An information processing apparatus according to claim 12, wherein the printer driver corresponding to each of the printers registered by said registering means generates the print data.

14. (Original) An information processing apparatus according to claim 11, wherein if all the printers cannot execute the print process, this effect is output to a printer which outputs the distributed printing result when an error occurs.

15. (Canceled)

16. (Original) An information processing apparatus according to claim 12, wherein said registering means registers a printer to which the distributed printing result report is output.

17. (Original) An information processing apparatus according to claim 11, wherein the print data is generated by adding an off-line command to the print data for the distributed printing.

18. (Original) An information processing apparatus according to claim 11, further comprising:

judging means for judging whether each of the printers registered by said registering means outputs the print job normally,

wherein the distributed printing result report formed by said report forming means is output to a printer to which the report is output, if said judging means judges that the print job for each printer cannot output normally.

19. (Original) An information processing apparatus according to claim 11, further comprising:

detecting means for detecting a print job process error by monitoring a process state of the print job distributed to the printers by said output control means, wherein said re-arranging means re-arranges a combination of a plurality of printers capable of normally outputting the print job distributed to the printers by said output control means, in accordance with a detection result of the print job process error by said detecting means.

20. (Currently Amended) An information processing method for dividing a print job to make a plurality of printers execute a print process, comprising:

a spooling step of spooling device-independent-format data converted from data provided by an application; ~~data in specific file formats in accordance with a combination of a plurality of printers for outputting the divided print jobs;~~ and

an assignment step for generating from the device-independent-format data spooled by said spooling step, a plurality of pieces of divided print data for distribution printing, the divided print data being formed in a device-independent-format;

an output step for outputting the plurality of pieces of divided print data generated by said assignment step to respective corresponding printer drivers; and

an output control step of outputting a plurality of pieces of print data, generated in a device-dependent format from the respective ones of the plurality of pieces of divided print data output by said output step, to the respective ones of the plurality of printers, ~~generating divided print data from the data spooled by said spooling step, and outputting the divided print data to the printers in order to print the divided print jobs at the printers~~

wherein said assignment step is able to assign the plurality of pieces of divided print data in the device-independent format to the printer drivers that generate different types of print data.

21. (Original) An information processing method according to claim 20, further comprising a registering step of registering a plurality of output destination printers.

22. (Canceled)

23. (Currently Amended) An information processing method according to claim 20, further comprising a judging step of judging a combination of the plurality of printers and judging whether device-dependent data or device-independent data is spooled.

24. (Original) An information processing method according to claim 23, wherein said judging step judges whether all of the plurality of printers are printers using a printer language capable of dividing the print job in a page unit.

25. (Original) An information processing method according to claim 23, wherein said judging step judges whether all of the plurality of printers are printers of a same type.

26. (Original) An information processing method according to claim 23, wherein said judging step judges whether all of the plurality of printers have a same printer driver.

27. (Currently Amended) An information processing method according to claim 23, wherein the device-dependent data is RAW data and device-independent data is EMF data.

28. (Original) An information processing method according to claim 20, further comprising:

a judging step of judging whether a page number of a page to be printed can be designated in the print job to be output from each printer; and

a transfer control step of copying the print job as many as the number of printers for outputting the divided print jobs, adding a page number of a page to be printed to each of the copied print jobs, and transferring the copied print jobs to the printers, if said judging step judges that the page number can be designated, and if said judging step judges that the page number cannot be designated, dividing the print jobs for each page to be printed at the printers for distributed printing and transferring the divided print jobs to the printers.

29. (Original) An information processing method according to claim 28, wherein said judging step judges from page designation print performance information of each printer whether the page number of a page to be printed can be designated in the print job to be output from each printer.

30. (Currently Amended) An information processing method according to claim 21, further comprising:



a re-arranging step of re-arranging a combination of a plurality of printers for outputting the divided print job[[s]], among the plurality of printers registered by said registering step, if a printer for outputting the divided print job cannot execute a print process; and

a report forming step of forming a distributed printing result report in accordance with a distributed printing result obtained by the printers re-arranged by said re-arranging step,

wherein after the distributed printing by the rearranged printers, the distributed printing result report formed by said report forming step is output to one of the re-arranged printers.

31. (Original) An information processing method according to claim 21, further comprising a distributed data generating step of dividing the print job and making a printer driver corresponding to each printer generate print data to print the print data at the printers registered by said registering step, wherein said distributed data generating step controls each printer driver to generate the print data added with an off-line command.

32. (Original) An information processing method according to claim 31, wherein the printer driver corresponding to each of the printers registered by said registering means generates the print data.

33. (Original) An information processing method according to claim 30, wherein if all the printers cannot execute the print process, this effect is output to a printer which outputs the distributed printing result when an error occurs.

34. (Canceled)

35. (Original) An information processing method according to claim 31, wherein said registering step registers a printer to which the distributed printing result report is output.

36. (Original) An information processing method according to claim 30, wherein the print data is generated by adding an off-line command to the print data for the distributed printing.

37. (Original) An information processing method according to claim 30, further comprising:

a judging step of judging whether each of the printers registered by said registering step outputs the print job normally,

wherein the distributed printing result report formed by said report forming step is output to a printer to which the report is output, if said judging step judges that the print job for each printer cannot output normally.

38. (Original) An information processing method according to claim 30, further comprising:

a detecting step of detecting a print job process error by monitoring a process state of the print job distributed to the printers by said output control step,

wherein said re-arranging step re-arranges a combination of a plurality of printers capable of normally outputting the print job distributed to the printers by said output control step, in accordance with a detection result of the print job process error by said detecting step.

39. (Currently Amended) A computer-readable memory medium which stores a computer program for a method of dividing a print job to make a plurality of printers execute a print process, said program comprising:

a spooling step of spooling device-independent-format data converted from data provided by an application; ~~data in specific file formats in accordance with a combination of a plurality of printers for outputting the divided print jobs; and~~

an assignment step for generating from the device-independent-format data spooled by said spooling step, a plurality of pieces of divided print data for distribution printing, the divided print data being formed in a device-independent format;

an output step for outputting the plurality of pieces of divided print data generated by said assignment step to respective corresponding printer drivers; and

an output control step of outputting a plurality of pieces of print data generated in a device-dependent format from the respective ones of the plurality of pieces of divided print data output by said output means, to the respective ones of the plurality of printers, ~~generating divided print data from the data spooled by said spooling step, and outputting the divided print data to the printers in order to print the divided print jobs at the printers~~

wherein said assignment step is able to assign the plurality of pieces of divided print data in the device-independent format to the printer drivers that generate different types of print data .

40. (Original) A computer-readable memory medium according to claim 39, wherein said program further comprises a registering step of registering a plurality of output destination printers.

41. (Canceled)

42. (Original) A computer-readable memory medium according to claim 39, wherein said program further comprises a judging step of judging a combination of the plurality of printers and judging whether device-dependent data or device-independent data is spooled.

43. (Original) A computer-readable memory medium according to claim 42, wherein said judging step judges whether all of the plurality of printers are printers using a printer language capable of dividing the print job in a page unit.

44. (Original) A computer-readable memory medium according to claim 42, wherein said judging step judges whether all of the plurality of printers are printers of a same type.

45. (Original) A computer-readable memory medium according to claim 42, wherein said judging step judges whether all of the plurality of printers have a same printer driver.

46. (Original) A computer-readable memory medium according to claim 42, wherein the device-dependent data is RAW data and device-independent data is EMF data.

47. (Original) A computer-readable memory medium according to claim 39, wherein said program further comprises:

a judging step of judging whether a page number of a page to be printed can be designated in the print job to be output from each printer; and

a transfer control step of copying the print job as many as the number of printers for outputting the divided print jobs, adding a page number of a page to be printed to each of the copied print jobs, and transferring the copied print jobs to the printers, if said judging step judges that the page number can be designated, and if said judging step judges that the page number cannot be designated, dividing the print jobs for each page to be printed at the printers for distributed printing and transferring the divided print jobs to the printers.

48. (Original) A computer-readable memory medium according to claim 47, wherein said judging step judges from page designation print performance information of each printer whether the page number of a page to be printed can be designated in the print job to be output from each printer.

49. (Currently Amended) A computer-readable memory medium according to claim 40, wherein said program further comprises:

a re-arranging step of re-arranging a combination of a plurality of printers for outputting the divided print job[[s]], among the plurality of printers registered by said registering step, if a printer for outputting the divided print job cannot execute a print process; and

a report forming step of forming a distributed printing result report in accordance with a distributed printing result obtained by the printers re-arranged by said re-arranging step,

wherein after the distributed printing by the re-arranged printers, the distributed printing result report formed by said report forming step is output to one of the re-arranged printers.

50. (Original) A computer-readable memory medium according to claim 40, wherein said program further comprises a distributed data generating step of dividing the print job and making a printer driver corresponding to each printer generate print data to print the print data at the printers registered by said registering step, wherein said distributed data generating step controls each printer driver to generate the print data added with an off-line command.

51. (Original) A computer-readable memory medium according to claim 50, wherein the printer driver corresponding to each of the printers registered by said registering step generates the print data.

52. (Original) A computer-readable memory medium according to claim 49, wherein if all the printers cannot execute the print process, this effect is output to a printer which outputs the distributed printing result when an error occurs.

53. (Canceled)

54. (Original) A computer-readable memory medium according to claim 50, wherein said registering step registers a printer to which the distributed printing result report is output.

55. (Original) A computer-readable memory medium according to claim 49, wherein the print data is generated by adding an off-line command to the print data for the distributed printing.

56. (Original) A computer-readable memory medium according to claim 49, wherein said program further comprises:

a judging step of judging whether each of the printers registered by said registering step outputs the print job normally,

wherein the distributed printing result report formed by said report forming step is output to a printer to which the report is output, if said judging step judges that the print job for each printer cannot output normally.

57. (Original) A computer-readable memory medium according to claim 49, wherein said program further comprises:

a detecting step of detecting a print job process error by monitoring a process state of the print job distributed to the printers by said output control step,

wherein said re-arranging step re-arranges a combination of a plurality of printers capable of normally outputting the print job distributed to the printers by said output control step, in accordance with a detection result of the print job process error by said detecting step.

58. (Currently Amended) A computer program for a method of dividing a print job to make a plurality of printers execute a print process, said program comprising:

a spooling step of spooling device-independent-format data converted from data provided by an application; ~~data in specific file formats in accordance with a combination of a plurality of printers for outputting the divided print jobs;~~ and

assignment step for generating from the device-independent-format data spooled by said spooling step, a plurality of pieces of divided print data for distribution printing, the divided print data being formed in a device-independent format;

output step for outputting the plurality of pieces of divided print data generated by said assignment step to respective corresponding printer drivers; and

an output control step of outputting a plurality of pieces of print data, generated in a device-dependent format from the respective ones of the plurality of pieces of divided print data output by said output means, to the respective ones of the plurality of printers, ~~generating divided print data from the data spooled by said spooling step, and outputting the divided print data to the printers in order to print the divided print jobs at the printers~~



wherein said assignment step is able to assign the plurality of pieces of divided print data in the device-independent format to the printer drivers that generate different types of print data.

59. (Original) A computer program according to claim~58, wherein said program further comprises a registering step of for registering a plurality of output destination printers.

60. (Canceled)

61. (Original) A computer program according to claim 58, wherein said program further comprises a judging step of judging a combination of the plurality of printers and judging whether device-dependent data or device-independent data is spooled.

62. (Original) A computer program according to claim 61, wherein said judging step judges whether all of the plurality of printers are printers using a printer language capable of dividing the print job in a page unit.

63. (Original) A computer program according to claim 61, wherein said judging step judges whether all of the plurality of printers are printers of a same type.

64. (Original) A computer program according to claim 61, wherein said judging step judges whether all of the plurality of printers have a same printer driver.

65. (Original) A computer program according to claim 61, wherein the device-dependent data is RAW data and device-independent data is EMF data.

66. (Original) A computer program according to claim 58, wherein said program further comprises:

a judging step of judging whether a page number of a page to be printed can be designated in the print job to be output from each printer; and

a transfer control step of copying the print job as many as the number of printers for outputting the divided print jobs, adding a page number of a page to be printed to each of the copied print jobs, and transferring the copied print jobs to the printers, if said judging step judges that the page number can be designated, and if said judging step judges that the page number cannot be designated, dividing the print jobs for each page to be printed at the printers for distributed printing and transferring the divided print jobs to the printers.

67. (Original) A computer program according to claim 66, wherein said judging step judges from page designation print performance information of each printer whether the page number of a page to be printed can be designated in the print job to be output from each printer.

68. (Currently Amended) A computer program according to claim 59, wherein said program further comprises:

a re-arranging step of re-arranging a combination of a plurality of printers for outputting the divided print job[[s]], among the plurality of printers registered by said

registering step, if a printer for outputting the divided print job cannot execute a print process; and

a report forming step of forming a distributed printing result report in accordance with a distributed printing result obtained by the printers re-arranged by said re-arranging step,

wherein after the distributed printing by the rearranged printers, the distributed printing result report formed by said report forming step is output to one of the re-arranged printers.

69. (Original) A computer program according to claim 59, wherein said program further comprises a distributed data generating step of dividing the print job and making a printer driver corresponding to each printer generate print data to print the print data at the printers registered by said registering step, wherein said distributed data generating step controls each printer driver to generate the print data added with an off-line command.

70. (Original) A computer program according to claim 69, wherein the printer driver corresponding to each of the printers registered by said registering step generates the print data.

71. (Original) A computer program according to claim 68, wherein if all the printers cannot execute the print process, this effect is output to a printer which outputs the distributed printing result when an error occurs.

72. (Canceled)

73. (Original) A computer program according to claim 69, wherein said registering step registers a printer to which the distributed printing result report is output

74. (Original) A computer program according to claim 68, wherein the print data is generated by adding an offline command to the print data for the distributed printing.

75. (Original) A computer program according to claim 68, wherein said program further comprises:

a judging step of judging whether each of the printers registered by said registering step outputs the print job normally,

wherein the distributed printing result report formed by said report forming step is output to a printer to which the report is output, if said judging step judges that the print job for each printer cannot output normally.

76. (Original) A computer program according to claim 68, wherein said program further comprises:

a detecting step of detecting a print job process error by monitoring a process state of the print job distributed to the printers by said output control step,

wherein said re-arranging step re-arranges a combination of a plurality of printers capable of normally outputting the print job distributed to the printers by said

output control step, in accordance with a detection result of the print job process error by said detecting step.